M/037/012

United States Department of Agriculture | Forest Service | Moab Ranger District | 125 West 200 South Moab, Utah 84532

Reply to: 2810

Date: September 11, 1989

Mr. Holland Shepherd
State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Dear Holland:

Enclosed you will find our revised reclamation bond calculations for the Pandora Mine vent hole located on the Moab District, Manti-LaSal National Forest. The amount of $8,500 should be allocated against your existing bond with Umetco Minerals to cover this project. The $11,500 previously calculated should be disregarded and replaced by $8,500. This allocation should be made as soon as possible. Also, prior to this bond's release, the Forest Service must review the site and upon satisfactory completion of reclamation will make final written approval for the release of the bond.

If you have any questions concerning these calculations please call me or Debbie Johnson at (801) 259-7155. Thank you for your cooperation.

Sincerely,

Jerald B. Shaw

JERALD B. SHAW
District Ranger

Enclosure

REVISED RECLAMATION EVLAUATION WORKSHEET

Umetco Minerals Corporation
Pandora Mine Vent Hole (1x), MLS4-2810-4/20/89

I.	Road Work and Erosion Control	$610
II.	Fan and Concrete Pad Removal	$162
III.	Power Line Removal	$168
IV.	Backfilling of Vent Hole (1x)	$4310
V.	Revegetation Costs	$199
VI.	Clean Up	$1031
VII.	Transport	$594
VIII.	Administration	$1415
	Total	$8489
	Rounded for Bonding	$8500

I. Road Work and Erosion Control

Work will include the installation of waterbars in approximately 1/2 mile of road. All berms will be pulled back across the the road, and all roads will be ripped and seeded.

A. Equipment - Dozer TD20 with ripper $75.48/hr

B. Labor Operator $11.71/hr

C. Work

Ripping 2640 lin ft / 6000 ft / hr = 0.44hrs

Waterbars @ 200 ft spacing
2640 ft / 200/bar x 0.5 hr/bar = 6.6 hrs

Use 7 hrs x $(75.48 +11.71)/hr = **$610**

II. Fan and Concrete Pad Removal

Work will include removal of fan and 14 foot by 14 foot concrete pad.

A. Equipment - Loader one hour to break up and load
Truck to haul away waste to vent hole
already paid in vents

B. Labor - 2 labors @ $7.02/hr for one day
pickup for transportation

C. Wc labor 2 ea x 8hrs x $7.0[redacted] = $112
loader 1hr x ($37.86 + 11.71)/hr = $50

sub total = **$162**

III. Power Line Removal

Work will include removing power lines and poles. All holes will be backfilled and covered with top soil.

A. Equipment - Backhoe 510B $22.65/hr

B. Labor - Operator $11.71/hr
Labor $ 7.02/hr

C. Work
1/2hr per pole
1/2 hr $(22.65 + 11.71 + 7.02)/hr = $21/pole
8 poles x $21/pole = **$168**

IV. Backfilling of Vent Holes

Work will include backfilling the vent hole. The bottom of the vent hole will be backfilled with rip-rap covered with fines and an 5 foot slurry cement plug. Waste rock will then be backfilled on top of the plug to within 10 feet of the gound surface. Another 5 foot concrete plug will be placed to within 2 feet of the ground surface and the remainder will be covered with top soil.

A. Transportation

B. Equipment - Dump trucks (10yds) $32.33/hr
Loader (2-1/2yds) $38.45/hr
Backhoe (15-6 depth) $22.65/hr

C. Labor - Drivers $10.12/hr
Loader operator $11.71
Backhoe operator $11.71

D. Time - One 10 hour day for a loader, backhoe, and 4 dump trucks

Loader 10 hrs x ($38.45 + $11.71)/hr / 611 yds = $.82/yd

Dump trucks 4 ea x 10hrx($32.33+10.12)/hr / 611yds x (3mi)mi = $.93/ yd mi

E. Work

Rip-rap
Volume = h x pi x r x r / 3
= {8ft+6ft/2 x tan 34} x 3.14 x
{[2 x 8ft / tan 34 + 6 ft] / 2}squared

= 10 ft x 15 ft x 15 ft pi / 3 = 2356 cu ft
= 87 cu yd

base cost = $1.50/yd
royalty cost = $0.30/yd
loading cost = $0.82/yd
hauling cost =
3 mi x $0.93/yd mi = $2.79/yd

sub total = $5.41/yd loose x 134#/cu ft/104#/cu ft = $6.97/ yd inplace
$6.97/yd x 87 yd = $606 / vent x 1 vent = $606

Concrete plugs
Volume = h x pi x r x r
= 5 ft x 3.14 x 3 ft x 3 ft
= 141 cu ft = 5 yds

base cost = $64.50/yd x 5 yds = $322
hauling cost
$3.00/ load mi x 34 mi = $102
sub total = $424 / plug x 2 plugs/vent x 1 vent = $848

common fill
Volume = h x pi x r x r
= 500 ft x 3.14 x 3 ft x 3 ft
= 14137 cu ft = 524 cu yd

royalty cost = $0.30/yd
load cost = $0.82/yd
hauling cost
$0.93/yd x 3 mi = $2.79/yd
backhoe
8 hr ($22.65+11.71)/hr/524yd = $0.52/yd
sub total $4.43/yd x 128# cu ft / 104#/cu ft = $5.45/yd
524 yd vent x $5.45/yd x 1 vent = $2856

Sub Total for backfilling of vent hole = **$4310**

V. Revegetation Costs

Work will include revegetation of all disturbed sites, including the roads, the power lines, the cutting catch ponds, and the vent hole sites. These areas will be recontoured and reseeded, and vehicle traffic over the reclaimed sites will be prohibited.

Area to be disturbed 1.5 acres.

A. Seed Cost

Species	lb/acre	cost/lb	cost/1.5 acres
Crested Wheatgrass	3	$2.00	$9.00
Orchard Grass	2	2.00	6.00
Intermediate Wheatgrass	2	2.00	6.00
Yellow Sweet Clover	1/2	2.00	1.50
Ladak Alfalfa	1/2	2.0	1.50
		Total	$ 24.00

B. La[redacted] (1 day) 2 laborers x 8 hrs x [redacted].02 = $112

C. Transportation: 1 round trips @ 70 miles
pickup @ $6.51 hr and $0.16/mi
8 hrs x $6.51/hr + 70 mi x $0.16/mi = $63

sub total **$199**

VI. Clean Up

Work will include removal of all equipment and trash.

A. Labor: (2 days) 2 laborers x 16 hrs x $7.02 = $225

B. Transportation: 2 round trips @ 70 miles
16 hrs x $6.52/hr = 2 x 70 mi x $0.16 = $127

C. Equipment - Dump truck with driver two days
2 ea x 8 hr x $(32.33 + 10.12)/hr = $679

sub total **$1031**

VII. Transport

Dozer, Loader and Backhoe one 66 mile round trip each
3 trip x 66 mile x $1.00/ mile = **$594**

VIII. Administration

20 % of $7074 = **$1415**